

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 7390/PCT/RKK	FOR FURTHER ACTION		see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, Item 5 below.
International application No. PCT/US 03/19413	International filing date (day/month/year) 20/06/2003	(Earliest) Priority Date (day/month/year) 21/06/2002	
Applicant APPLIED MATERIALS, INC.			

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☒ because this figure better characterizes the invention.

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☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/19413

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01L21/00 C23C14/56

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L C23C B65G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 790 750 A (SCHWEIBEL OLIVIER ET AL) 13 December 1988 (1988-12-13) column 3, line 4 -column 5, line 20; figures 1,2	1-3,7,8, 11-14, 18,19, 22,23,29
Y	US 4 632 624 A (MIRKOVICH NINKO T ET AL) 30 December 1986 (1986-12-30) column 5, line 32 -column 8, line 35; figures 5,7 --- -/-	1-3,6,9, 12,17, 20,22,25

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *Z* document member of the same patent family

Date of the actual completion of the international search

9 October 2003

Date of mailing of the international search report

20/10/2003

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/19413

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 383 330 B1 (RAAIJMAKERS IVO) 7 May 2002 (2002-05-07)	1-4, 6-9, 12-15, 17-20, 22-24
Y	column 6, line 58 -column 9, line 28	1-3, 6, 9, 12, 17, 20, 22, 25
Y	column 10, line 55 -column 12, line 65; figures 2-8	1-3, 12, 13
A	column 1, line 30-50	5, 10, 16, 21
Y	EP 0 928 014 A (SHINETSU HANDOTAI KK) 7 July 1999 (1999-07-07) page 5, line 31-37; figure 1	1-3, 12, 13
X	US 4 455 177 A (FILIPPOV VLADIMIR I ET AL) 19 June 1984 (1984-06-19)	1
Y	column 1, line 8 -column 2, line 18; figures 1, 2 column 4, line 4 -column 5, line 24	1-3, 12, 13
X	EP 1 065 701 A (APPLIED MATERIALS INC), 3 January 2001 (2001-01-03)	1, 12
A	column 5, line 58 -column 8, line 42; figures FIG., 1	25-29

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/19413

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
✓ US 4790750	A	13-12-1988	FR 2594102 A1 AT 51038 T CA 1289357 C CN 87100626 A ,B DE 3669542 D1 DE 236639 T1 EP 0236639 A1 ES 2001286 A6 JP 62186187 A SU 1500151 A3	14-08-1987 15-03-1990 24-09-1991 26-08-1987 19-04-1990 07-04-1988 16-09-1987 01-05-1988 14-08-1987 07-08-1989
✓ US 4632624	A	30-12-1986	JP 60227420 A US 4727993 A	12-11-1985 01-03-1988
✓ US 6383330	B1	07-05-2002	US 2002033232 A1	21-03-2002
✓ EP 0928014	A	07-07-1999	JP 11186363 A EP 0928014 A2 US 6074202 A	09-07-1999 07-07-1999 13-06-2000
✓ US 4455177	A	19-06-1984	NONE	
✓ EP 1065701	A	03-01-2001	US 6245149 B1 EP 1065701 A2 JP 2001060558 A TW 476097 B	12-06-2001 03-01-2001 06-03-2001 11-02-2002